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EXAMINER	
PHAM, CHRYSTINE	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/051,268	CHANDHOKE ET AL.	
	Examiner	Art Unit	
	Chrystine Pham	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-28 and 31-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-28 and 31-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *15 April 2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to Amendment filed on February 14th 2005. Claims 2-3, 29-30 have been canceled. Claims 1, 25, 26, 28, 37, 39-45 have been amended. Claims 1, 4-28, 31-45 are presented for examination.

Response to Arguments

2. Applicant's arguments filed February 14th 2005 have been fully considered but they are not persuasive.

The Applicant essentially contend that "nowhere does Limondin teach or suggest, or even mention 'a graphical program', nor automatically generating such a graphical program" and that "Examiner has improperly equated a graphical program with a machine vision program" (page 10). It is noted that the Examiner has already established in previous Office Action that the claimed "graphical program" is anticipated by Limondin's step program (not "user program" which Limondin merely mentions in the Abstract). It is submitted that through out the detailed description, Limondin specifically focuses on describing the creation of the step program (not some "user program"), which is composed of steps (i.e., software objects) (see at least *step program, steps, software objects, C++ classes* col.4:25-67). Limondin specifically states that the steps can be edited graphically using point-and-click user interface and that the step program is displayed graphically in a tree control window (col.4:25-67). FIG.2 of Limondin is user interface view of the step program. Limondin further discloses the individual step operation of the step program is represented by an iconic picture (see at least *iconic picture, step operation, step program 100* col.5:37-40). In col.2:59-67 and col.4:34-67, Limondin discloses an object oriented method of structuring a software step program by composing software objects or steps in a hierarchical structure which both provides the execution order and the connection of inputs to outputs at each step and between steps. It is clear that these steps, which are connected to each other in a hierarchical structure are the equivalence of the claimed "interconnected nodes". And as mentioned above, each step icon represents an operation (i.e., "functionality") of the step

program. It is quite clear that the step program is the equivalence of the graphical code or the "graphical program comprises a plurality of interconnected nodes that visually indicate the functionality of the program". Limondin further discloses using the step program (i.e., graphical program) to create (i.e., implement) graphical machine vision operations and programs (i.e., sequence of operations) (see at least *step program, machine vision operations, new user interfaces* col.1:55-67; *step program, machine vision programs* col.2:59-67). Thus, in response to Applicant's allegation that the Examiner had "improperly equated a graphical program with a machine vision program", it is submitted the Applicant had simply misread the teaching of Limondin.

Applicant further contends that "Limondin nowhere teaches or suggests, or even mentions, a graphical program, nor automatic generation of graphical code for such a program, i.e., without direct user input" (page 17). Applicant is referred to the above discussion for Limondin's disclosure of the graphical program (i.e., step program). Also, as discussed above, each step in the step program is a software object (i.e., C++ class) implementing an operation/functionality of the step program. Each step is represented by an iconic picture. The step program is created by having the user graphically manipulating/editing the step icons' parameters (i.e., inputs and outputs) and connections between the icons. The execution order of the steps can also be graphically defined by the user (see at least *execution order, step, attribute* col.5:25-35). It is clear that the step program is not created by requiring the user to actually program/define each step (i.e., manually inputting C++ programming code to create a class associated with each step). It is also clear that in order to change execution order of the steps of the program, the user is not required to access and modify the actual programming code (i.e., software objects, C++ classes) to change the program flow, instead, by just manipulating/modifying attributes associated with the step icons graphically, the execution order of the steps is automatically changed (i.e., "without direct user input"). Thus, it is clear that the

graphical program/code (i.e., step program) is automatically, and programmatically generated without direct user input.

In response to Applicant's argument that "neither Limondin nor McDonald provides a motivation to combine" (page 18), it is submitted that the motivation to combine, as cited in previous Office Action is suggested by McDonald (see McDonald col.3:35-57; col.11:55-63; col.13:42-58; col.14:25-42).

In response to Applicant's argument that "McDonald neither suggests nor even hints at automatically generating graphical program based on a user-specified sequence of operations", it is submitted that in col.3:60-col.4:20, McDonald explicitly discloses automatically generating graphical code (i.e., graphical program) based on user selection of a control in a plurality of controls, wherein each control is associated with one or more graphical code portions or templates. It is further submitted that, in col.5:12-23, McDonald discloses the graphical code portion associated with the selected control may form the entire graphical program being created. It is inherent that the graphical program being created, which is comprised of one graphical code portion has at least a function (i.e., operation). Thus, one graphical code portion is the equivalence of one operation. In the same passage, McDonald discloses the graphical code portion as only a portion of a larger graphical program being created. It is clear from the passage that the larger graphical program comprises more than one graphical code portion, that is to say, more than one operation (i.e., sequence of operations). Furthermore, as disclosed in col.4:1-10, each control is associated with one or more graphical code portions. It is concluded that each control is the equivalence of "a sequence of operations" as claimed. Thus, McDonald clearly teaches "automatically generating graphical code based on a user-specified sequence of operations".

In response to Applicant's arguments against the references individually (i.e., Limondin and McDonald) (e.g., page 18), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (page 19), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

3. In view of the fore going discussion, rejection of claims 1-11, 18-45 under 35 U.S.C. 102(e) and claims 13-17 under 35 U.S.C. 103(a) is considered proper and maintained.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 4-11, 18-28, 31-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Limondin et al. (US 6226783), hereinafter, *Limondin et al.*.

Claim 1

Limondin et al. teach a computer-implemented method (e.g., see *object oriented method* col.2:59-65) for creating a graphical (i.e., graphical data flow) program (e.g., see *machine vision application* col.1:15-35; see *structuring a software step program, vision applications, computer programs, user interfaces* col.1:55-67; see *programs, graphical user interface* col.2:1-3; see *user interface components, GUI* col.2:15-22; col.2:59-65; see *STEPS, 100* FIG.2 & associated text; see FIG.6 & associated text; see FIGS.8A-8C & associated text; see *step program, editor objects* col.7:35-44) based on a sequence (i.e., prototype) (e.g., see *series of operations, "steps"* Abstract; see *set of operations, steps, sequence* col.1:15-35; see *list of operations* col.3:1-10; see *step inputs* col.5:8-13; see *execution order* col.5:20-35) that includes motion control (e.g., see *WarpStep 122* FIG.2 & associated text; see *WARP 122* FIG.3 & associated text), machine vision (e.g., see *VISION PROCESSOR BOARD* FIG.8A & associated text; see *machine vision application* col.1:15-35; see *machine vision operations* col.1:55-67), and data (i.e., images, and measurement data) acquisition (DAQ) operations (i.e., functionality) (e.g., see *AcquireStep 112* FIG.2 & associated text; see *ACQUIRE 112* FIG.3 & associated text; see *acquisition of an input image* col.1:15-35; see *feature extraction, features, size, area, length, distance* col.1:15-35;), the method comprising:

- means for displaying a graphical user interface (GUI) that provides GUI access to a set of operations (e.g., see *user interfaces* col.1:55-67; see *step program, tree control window* col.4:50-55; see *iconic picture, individual step operation* col.5:35-45; see FIG.2 & associated text; see *editor objects, graphical view, step* col.6:59-65), wherein the set of operations includes one or more motion control operations (e.g., see *motion device* col.3:15-27), one or more machine vision (i.e., image analyzing) operations (e.g., see *accelerated image processing* col.2:40-50), and one or more DAQ operations (e.g., see *AcquireStep 706a, AcquireStep 706b* FIG.9 & associated text; see *image acquisition* col.2:40-50);

- means for receiving user input to the graphical user interface specifying the sequence of operations (e.g., see *series of operations, "steps"* Abstract; see *set of operations, steps, sequence* col.1:15-35; see *list of operations* col.3:1-10; see *step inputs* col.5:8-13; see *operator, user interface control, step parameters, settings* col.6:59-col.7:3), wherein the specified sequence of operations includes at least one motion control operation (e.g., see *WarpStep 122* FIG.2 & associated text; see *WARP 122* FIG.3 & associated text), at least one machine vision operation (e.g., see *VISION PROCESSOR BOARD* FIG.8A & associated text; see *machine vision application* col.1:15-35; see *machine vision operations* col.1:55-67), and at least one DAQ operation (e.g., see *AcquireStep 112* FIG.2 & associated text; see *ACQUIRE 112* FIG.3 & associated text; see *acquisition of an input image* col.1:15-35; see *feature extraction, features, size, area, length, distance* col.1:15-35;);
- means for storing the specified sequence of operations based on the user input (e.g., see *GUID, database* col.4:55-65; see *steps, data structure, map* col.6:34-40; see *step program, disk* col.10:5-17); and
- means for programmatically/automatically generating a graphical program to implement the specified sequence of operations, wherein said automatically generating the graphical program comprises generating graphical code in the graphical program without direct user input (e.g., see *execution order, step, attribute* col.5:25-35; see *step program, steps, software objects, C++ classes* col.4:25-67; see *iconic picture, step operation, step program 100* col.5:37-40; col.2:59-67; col.4:34-67), and wherein the graphical code comprises a plurality of interconnected nodes (i.e., linking portions of graphical code wherein each portion of graphical code implements one of the operations in the sequence) which visually indicate the functionality of the graphical program that visually indicate functionality of the graphical program (e.g., see *software objects, steps, connection, inputs, outputs* col.2:59-65; see *STEPS, 100* FIG.2 & associated text; see

STEPS, 706a, 706b, 714 FIG.9 & associated text; see *steps, datum objects* col.4:34-42; see *iconic picture, individual step operation* col.5:35-45; see FIG.2 & associated text).

Claim 4

The rejection of base claim 1 is incorporated. *Limondin et al.* further teach further comprising: executing the graphical program to perform (i.e., affect an action which operation is operable to perform) the sequence of operations (e.g., see *target processor, user program* Abstract; col.2:30-35; see *execution, program* col.2:40-50; see *steps, operations* col.2:59-67; see *execution order* col.5:20-35; col.10:4-10).

Claim 5

The rejection of base claim 1 is incorporated. *Limondin et al.* further teach wherein the graphical program includes a block diagram portion (e.g., see *software objects, steps, tree structure* col.4:25-31; see *STEPS 100* FIG.2 & associated text) and a user interface panel portion (e.g., see *step program, tree control window* col.4:50-55; see FIG.2 & associated text).

Claim 6

The rejection of base claim 1 is incorporated. Claim recites limitations, which have been addressed in claim 1, therefore, is rejected for the same reasons as cited in claim 1.

Claim 7

The rejection of base claim 1 is incorporated. *Limondin et al.* further teach wherein said programmatically generating the graphical program comprises including one or more nodes in the graphical program corresponding to the operations in the sequence (e.g., see *iconic picture, individual step operation* col.5:35-45; see FIG.2 & associated text; see *step code, object functions* col.10:9-17).

Claim 8

The rejection of base claim 1 is incorporated. Claim recites limitations, which have been addressed in claim 3, therefore, is rejected for the same reasons as cited in claim 3.

Claim 9

The rejection of base claim 8 is incorporated. *Limondin et al.* further teach wherein each portion of graphical code includes one or more graphical program nodes, wherein each node has one or more inputs or outputs (e.g., see *IN DATA 510, 512, 514, OUT DATA 234, 236, 238* FIG.5 & associated text;); wherein generating each portion of graphical code comprises connecting the node inputs and outputs together in order to implement the operation with which the portion of graphical code is associated (e.g., see *STEP OBJECT 200* FIG.5 & associated text; see *connection of inputs to outputs at each step* col.2:59-65; see *inputs, outputs, operation, step* col.3:1-11).

Claim 10

The rejection of base claim 8 is incorporated. *Limondin et al.* further teach wherein linking a first portion of graphical code to a second portion of graphical code comprises connecting an output of a node in the first portion of graphical code to an input of a node in the second portion of graphical code (e.g., see *connection of inputs to outputs, between steps* col.2:59-65; see *results, output, inputs, one step, other steps* col.4:42-50).

Claim 11

The rejection of base claim 8 is incorporated. *Limondin et al.* further teaches further comprising: for each operation in the sequence, retrieving information associated with the operation from a database; wherein generating the portion of graphical code that implements a particular operation utilizes the database information retrieved for the particular operation (e.g., see *recipe database* col.2:1-6; see *GUID, database* col.4:55-65).

Claim 18

The rejection of base claim 1 is incorporated. *Limondin et al.* further teach wherein said receiving user input to the graphical user interface specifying a desired sequence of operations does not include receiving user input specifying programming language code to implement the sequence of operations (e.g., see *user programs, computer language, programming language* Abstract; see *drop-in functionality, language independent software components* col.1:55-67; see *program, point and click graphical user interface* col.2:1-6).

Claim 19

The rejection of base claim 1 is incorporated. *Limondin et al.* further teach wherein the sequence is operable to perform one or more (i.e., two) of:

- control motion of a device (e.g., see *motion device, moving camera* col.3:15-27);
- analyze acquired images (e.g., see *acquisition of an input image* col.1:15-35; see *accelerated image processing, image acquisition* col.2:40-50; see *camera images* col.4:15-22; see FIG.9 & associated text; see FIG.3 & associated text; see *acquisition of an image* col.5:60-65; see *camera images* col.7:64-67); and
- acquire measurement data (e.g., see *acquisition of an input image* col.1:15-35; see *feature extraction, features, size, area, length, distance* col.1:15-35; see *distance, features* col.4:15-22; see FIG.9 & associated text; see *camera images, distance between features* col.7:64-67; col.9:5-25).

Claims 20-23

The rejection of base claim 1 is incorporated. Claims recite limitations, which have been addressed in claims1, 4, 18, 19, therefore, are rejected for the same reasons as cited in claims 1, 4, 18, 19.

Claim 24

The rejection of base claim 22 is incorporated. *Limondin et al.* further teach further comprising: for each operation to be configured, displaying a graphical panel including graphical user interface elements for setting properties of the operation and receiving user input to the graphical panel to set one or more properties of the operation (e.g., see *user interface components, GUI, setting of parameters* col.2:15-22; see *parameters, inputs, outputs* col.3:1-15; col.4:55-65).

Claims 25-27

Claims recite limitations, which have been addressed in claim 1, therefore, are rejected for the same reasons as cited in claim 1.

Claim 28

Claim recites a memory medium comprising program instructions executable (e.g., see *step program, disk* col.10:5-17) for performing the method addressed in claim 1, therefore, is rejected for the same reasons as cited in claim 1.

Claims 31-36

Claims recite limitations, which have been addressed in claims 1-4, 19, and 20, therefore, are rejected for the same reasons as cited in claims 1-4, 19, and 20.

Claim 37

Limondin et al. teach a system (e.g., see FIGS.8A-8C & associated text) for creating a graphical program based on a sequence that includes motion control, machine vision, and data acquisition (DAQ) operations (see claim 1), the system comprising:

- a processor (e.g., see *target processor* Abstract);
- a memory storing program instructions (e.g., see *step program, disk* col.10:5-17); and
- a display device (e.g., see FIG.2 & associated text);
- wherein the processor is operable to execute the program instructions stored in the memory to:

- display a graphical user interface (GUI) on the display device that provides access to a set of operations, wherein the set of operations includes one or more motion control operations, one or more machine vision operations, and one or more DAQ operations (see claim 1);
- receive user input to the graphical user interface specifying the sequence of operations, wherein the specified sequence of operations includes at least one motion control operation, at least one machine vision operation, and at least one DAQ operation (see claim 1);
- store the specified sequence of operations based on the user input (see claim 1); and
- programmatically/automatically generate a graphical program to implement the specified sequence of operations, wherein, in automatically generating the graphical program, the program instructions are executable to generate graphical code in the graphical program without direct user input, wherein the graphical code comprises a plurality of interconnected nodes which visually indicate the functionality of the graphical program (see claim 1).

Claim 38

The rejection of base claim 37 is incorporated. *Limondin et al.* further teach further comprising:

- a motion control device (e.g., see *motion device, moving camera* col.3:15-27; see *Calibrate* col.7:19-50);
- an image acquisition device (e.g., see *acquisition of an input image* col.1:15-35); and
- a data acquisition device (e.g., see *acquisition of an input image* col.1:15-35);
- wherein the processor is operable to execute the graphical program to:
  - control the motion control device to move an object (e.g., see *WarpStep 122* FIG.3 & associated text; see *WarpPart, move the image* col.7:19-50);
  - control the image acquisition device to acquire one or more images of the object; and
  - control the data acquisition device to acquire measurement data of the object.

Claim 39

Claim recites limitations, which have been addressed in claims 1, and 37, therefore, is rejected for the same reasons as cited in claims 1, and 37.

Claims 40-45

Claims recite limitations, which are subcombinations that have been addressed in claim 1, therefore, are rejected for the same reasons as cited in claim 1.

Claim Rejections - 35 USC § 103

i. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which *the invention was made.*

ii. Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over *Limondin et al.* in view of McDonald et al. (US 5966532), hereinafter, *McDonald et al.*.

Claim 12

The rejection of base claim 1 is incorporated. *Limondin et al.* do not expressly disclose creating an association between the sequence and the graphical program, modifying the sequence to create a new sequence in response to user input after said creating the association, and modifying the graphical program according to the new sequence to create a new graphical program. However, *McDonald et al.* disclose:

- creating an association between the sequence and the graphical program (e.g., see *212* FIG.2 & associated text; see *212* FIG.4 & associated text; see *association, control, graphical code portion* col.5:10-25; col.3:60-col.4:20; col.4:1-10),
- modifying the sequence to create a new sequence in response to user input after said creating the association (e.g., see *226-230*.FIG.3 & associated text; see *228* FIG.4 & associated text; col.5:20-45), and
- modifying the graphical program according to the new sequence to create a new graphical program (e.g., see *226-230* FIG.3 & associated text; see *230* FIG.4 & associated text).

Limondin et al. and *McDonald et al.* are analogous art because they are both directed to generating graphical program based on user inputs specifying data acquisition operations. It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of *McDonald et al.* into that of *Limondin et al.* for the inclusion of creating an association between the sequence and the graphical program, modifying the sequence, and modifying the graphical program to create new graphical program. And the motivation for doing so would have been to facilitate changes or updates to graphical code portions and accordingly, the associations between user inputs (i.e., graphical icons representing corresponding operations) and the aforementioned graphical code portions, thus, providing an improved graphical programming environment where the user has ultimate programming control over the how the graphical programs are generated or defined based input sequences received through a GUI (see *McDonald et al.* col.3:35-57; col.11:55-63; col.13:42-58; col.14:25-42).

Claim 13

The rejection of base claim 12 is incorporated. *Limondin et al.* *McDonald et al.* further teach

- wherein said modifying the graphical program according to the new sequence uses the association between the sequence and the graphical program (e.g., see *224* FIG.3 & associated text; see *282, 284* FIG.6 & associated text; col.6:1-10);

- wherein the association remains between the new sequence and the new graphical program (e.g., see *288* FIG.6 & associated text). It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of *McDonald et al.* into that of *Limondin et al.*. And the motivation for doing so would have been that which has been recited in claim 12.

Claim 14

The rejection of base claim 1 is incorporated. *McDonald et al.* further teach further comprising:

- creating an association between the sequence and the graphical program (see claim 12); and
- locking the association between the sequence and the graphical program, wherein said locking prevents user editing of the graphical program (e.g., see *locking prevents user editing* col.5:10-22). It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of *McDonald et al.* into that of *Limondin et al.*. And the motivation for doing so would have been that which has been recited in claim 12.

Claim 15

The rejection of base claim 14 is incorporated. *McDonald et al.* further teach further comprising:

- unlocking the association between the sequence and the graphical program in response to user input after said locking (e.g., see *262* FIG.5 & associated text);
- directly changing the graphical program in response to user input after said unlocking (e.g., see *266* FIG.5 & associated text). It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of *McDonald et al.* into that of *Limondin et al.*. And the motivation for doing so would have been that which has been recited in claim 12.

Claim 16

The rejection of base claim 15 is incorporated. *McDonald et al.* further teach wherein said unlocking removes the association between the sequence and the graphical program (e.g., see *264* FIG.5 & associated text). It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of *McDonald et al.* into that of *Limondin et al.*. And the motivation for doing so would have been that which has been recited in claim 12. It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of *McDonald et al.* into that of *Limondin et al.*. And the motivation for doing so would have been that which has been recited in claim 12.

Claim 17

The rejection of base claim 14 is incorporated. *McDonald et al.* further teach further comprising:

- modifying the graphical program in response to user input after said generating the graphical program and after said creating the association between the sequence and the graphical program (e.g., col.5:10-62);
- determining if an association exists between the sequence and the graphical program in response to said modifying the graphical program (e.g., see *224* FIG.3 & associated text; see *wizard* col.5:35-40); and

removing the association between the sequence and the graphical program in response to said modifying (e.g., col.5:47-63; see *breaks the association* col.6:5-10). It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of *McDonald et al.* into that of *Limondin et al.*. And the motivation for doing so would have been that which has been recited in claim 12.

Conclusion

iii. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

iv. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chrystine Pham whose telephone number is 571-272-3702. The examiner can normally be reached on Mon-Fri, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on 571-272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CP
May 29, 2005

TUAN DAM
SUPERVISORY PATENT EXAMINER